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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/298,282	04/23/1999	MUHAMMED IBRAHIM SEZAN	SLA0115	1864

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EXAMINER

BELIVEAU, SCOTT E

ART UNIT PAPER NUMBER

2614

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/298,282

Applicant(s)

SEZAN ET AL.

Examiner

Scott Beliveau

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's argument, see Page 5 Paragraphs 2-3, filed 18 February 2002, with respect to claim 8 has been fully considered and is persuasive. The rejection of claim 8 under 35 U.S.C. 112 has been withdrawn.
2. Applicant's arguments with respect to claims 1-12 and 14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 8 is objected to because the claim references "said PSIP information". While there appears to be insufficient antecedent basis for this limitation in the claim, the limitation does not rise to the level of being indefinite, as the examiner believes that the applicant is referencing the earlier reference to PSIP data. For the purpose of clarity, the examiner would request for the claim to be amended such that line 5 of the claim references "Program and System Information Protocol (PSIP) information [data]".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "said audiovisual program description". There is insufficient antecedent basis for this limitation in the claim. In particular, the examiner is unclear what is necessarily being claimed as the "audio program description" may be referring to the PSIP data, and/or the references to key-clips. For the purposes of art evaluation, the examiner shall presume that "said audiovisual program description" is referencing the information extracted via the description extraction module of claim 12.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
8. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (US Pat No. 6,357,042), in view of the Hanjalic et al. "Automation of Systems Enabling

Search on Stored Video Data” article (provided in applicant’s IDS of 26 July 2000), and in further view of Sezan et al. (US Pat No. 6,236,395).

In consideration of claim 1, the Srinivasan et al. reference discloses a “system for providing a digital television data broadcast service” [43] to “at least one client receiver” [48] as shown in Figure 7. The system is taught to comprise “a data service authoring subsystem” [51] that is “operable to receive an audiovisual program” from a video head end [45] and to identify and to provide “key clip data” data through a defined MPEG2 metadata format (Col 3, Lines 47-52; Col 13, Lines 15-40, 64-67 – Col 14, Line 1; Col 17, Lines 6-13; Col 28, Lines 61-66 – Col 29, Lines 1-7) which identifies a “key object” or frame relating to a “key event” such as a touchdown (Col 28, Lines 65-67), “a data service encoder” and “an MPEG-2 multiplexer [259] (Col 13, Lines 64-67 – Col 13, Line 1; Col 37, Lines 35-49).

As to the recited limitation that “key clip data includes descriptors that directly correspond to descriptors in the PSIP data”, the Srinivasan et al. reference does not explicitly disclose or preclude that the aforementioned identification of clips such that there is a direct correspondence. The Hanjalic et al. article discloses a “data service authoring subsystem” and “data service encoder” that is operable to automate the generation of “key clips” such that the “key clip data includes descriptors that directly correspond to descriptors in the PSIP data” (Sections 5.1 and 5.2). The Srinivasan et al. reference suggests that it may be used in conjunction with automated natural scene change techniques similar to those described in the Hanjalic et al. reference in order to identify key frames (Col 26, Lines 3-30; Col 28, Lines 20-60). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the techniques for generating automated annotations as taught

in the Hanjalic et al. reference in conjunction with the Srinivasan et al. authoring system for the purposes of reducing the burden on the operator needed to manually identify and annotate key events or objects.

As to the limitation that the stream is subsequently “broadcast to at least on receiver in a format that allows customization at the receiver”, the aforementioned Srinivasan et al. reference discloses a “receiver” [205] which may utilize the broadcast information to further enable “customization” in conjunction with the ability to provide targeted advertisement using the aforementioned authored information (Col 32, Lines 22-40).

Assuming arguendo, the Sezan et al. reference discloses a “receiver” [16] (Col 8, Lines 9-12) capable of operating upon a “digital television data broadcast service” [38] (Col 7, Lines 63-67 – Col 8, Lines 1, 21-29; Col 12, Lines 17-27) which is operable to “customize” the broadcast such that a user may obtain desirable content. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the Sezan et al. receiver, if necessary, in conjunction with the system provided by the aforementioned combined references for the purpose of providing a method wherein a user may customize a broadcast audiovisual program in a personalized manner (Sezan et al.: Col 1, Lines 56-67).

In consideration of claims 2-3, and 5-6, the Srinivasan et al. reference discloses the use of the MPEG-2 presentation time stamp (PTS) construct and further suggests the use of any other time stamp for “referencing key clips” (Col 3, Lines 47-52; Col 6, Lines 41-47; Col 13, Lines 4-8, 64-67 – Col 14, Line 1). As the specification does not explicitly disclose any advantages associated with the recited MPEG “timing reference” methods, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize any of

Art Unit: 2614

the known MPEG timing references including as the “system time” “PCR/LCR” pair, “starting and ending flags”, or “starting and ending references” for the “referencing” of “key clips” as is suggested by Srinivasan et al. as such a selection would constitute a design consideration that is not distinguishable over the prior art.

Claim 4 is rejected wherein the use of a “video reference generator”, while not explicitly disclosed by Srinivasan et al., would be obvious to one of ordinary skill in the art to incorporate as part of the MPEG encoding process for the purposes of referencing video frames pertaining to the aforementioned “key clips” to real time clock PCR information. The instant application discloses that “key frames are special cases of key clips, i.e.; they can be viewed as key clips that contain a single frames.” (Page 6, Lines 1-3). Based on the disclosure of the instant application, the examiner concludes that “key frames” are a particular type of “key clip”. Claim 1 further defines “key clips” as comprising either at “least one key event or at least one key object”. A “key frame” is “at least one key object” wherein the phrase “at least” may be met by one or more objects.

Claim 7 is rejected wherein the Srinivasan et al. reference teaches that the aforementioned “defined format identifying key clips” or metadata may further “identify” or annotate the contents of the clip (Col 26, Lines 52-63; Col 28, Lines 61-67 – Col 29, Lines 1-7).

9. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sezan et al. (US Pat No. 6,236,395), in view of the Hanjalic et al. article, and in further view of Barton et al. (US Pat No. 6,233,389).

In consideration of claim 8, the Sezan et al. reference discloses a “receiver” [16] (Col 8, Lines 9-12) that is capable of operating upon a “digital television data broadcast service” [38] (Col 7, Lines 63-67). The receiver further is taught to comprise: a “demultiplexing and decoding module” [60], a “summarizer” [42/44] that is operable to “receive the audio visual program PSIP data and references to key-clips” [38] (Col 7, Lines 56-67 – Col 8, Line 1) and to subsequently “create summaries of the audiovisual program” (Col 8, Lines 21-67 – Col 9, Lines 1-8), a “navigation module. . . “ which allows a user to browse, search, and filter program related information (Col 9, Lines 23-26, 54-56; Col 12, Lines 4-8), and “memory” [50].

As to the aforementioned “memory”, the Sezan et al. reference teaches that the storage unit may comprise any storage device such as memory or magnetic media (Col 9, Lines 7-8) and that it is operable to store both the “programs and summaries” as disclosed in the operational example of the device (Col 9, Lines 34-67 – Col 10, Lines 1-37). In this example, the reference discloses that information may be stored on a removable media such as a DVD or a system hard drive. One of ordinary skill in the art would recognize that a hard drive such as those integrated in TiVo® or ReplayTV® (Col 13, Lines 8-21) is operable to store program material on either a “long term” or “short term” basis and as such the claimed limitation distinction between a “short-term” and a “long-term” memory may be met by a single memory structure such as a hard-drive. Furthermore, the instant application describes that both “memories” may comprise a hard disk (IA: Page 14, Lines 9-10, 23 – Page 15, Line 1) and does not disclose any particular advantage or rationale as to why physically separate hard drives would be utilized. Subsequently, the decision to use both a “long-term”

and a “short-term” memory as physically separate storage means would constitute a design decision that is not patentably distinguishable over the art.

As to the aforementioned “summarizer” [42/44], the Sezan et al. reference discloses that it is operable to utilize information that is available or extractable from data sources including PSIP information (Col 8, Lines 14-29; Col 12, Lines 17-27) in order to generate or extract “key clips” (Col 8, Lines 21-67 – Col 9, Lines 1-8). The claim does not require that the received “digital television data broadcast service” is the same as that generated in claim 1. Accordingly, it is implicit that the summarizer further comprises an “inference engine operable to combine said audio visual program description with said PSIP information, user preferences, and any other available program information” (Col 7, Lines 63 – Col 8, Lines 1, 14-29; Col 5, Lines 46-50) as further supported by the applicant’s remarks (Page 9, Lines 1-4). The Sezan et al. “inference engine”, however, does not explicitly disclose nor preclude that the “descriptors in the audiovisual program description directly correspond to descriptors in the PSIP information”.

The Hanjalic et al. article discloses a “summarizer” wherein “descriptors that directly correspond to descriptors in the PSIP data” are utilized to in order to provide identification of services and events for the user (Sections 5.1 and 5.2). Accordingly, it would have been obvious to modify the Sezan et al. reference, if necessary, to utilize “descriptors that directly correspond to descriptors in the PSIP information” as taught by Hanjalic et al. for the purpose of providing a means for providing a textual identification including additional details related to the clip over and above a simple title generator [68] as provided by Sezan et al.

In reference to the “demultiplexing and decoding module” the use of such in conjunction with receivers is well known in the art. The Sezan et al. reference discloses that the system is operable to receive program streams from any suitable source including PSIP/DVB-SI information in digital television broadcasts. Subsequently, both the Sezan et al. and the instant application would suggest that either apparatus is operable with a number of standards (Col 13, Lines 14-25, 40-45; IA: Page 8, Lines 16-20). With respect to the recited “MPEG-2” limitation, PSIP information is well known to be associated with “MPEG-2 encoding” as is further recognized by the instant application (IA: Page 7, Lines 19-23 – Page 8, Lines 1-2). Accordingly, one of ordinary skill in the art would recognize that the “demultiplexing and decoding module” [60] taught by Sezan et al. is operable to demultiplex and decode program [38] information commonly associated with an MPEG-2 transport stream.

Assuming arguendo, the Sezan et al. reference explicitly teaches that it may be used in conjunction with a TiVo[®] or ReplayTV[®] receiver (Col 13, Lines 8-21). The Barton et al. reference discloses such a receiver that includes an input section [101] that “demultiplexes and decodes” MPEG-2 streams (Col 3, Lines 30-49). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a multimedia storage and display system such as disclosed by Barton et al. in conjunction with the Sezan et al. teachings since it is explicitly suggested to do so by Sezan et al. (Col 13, Lines 8-21).

Claim 9 is rejected wherein the aforementioned “demultiplexing and decoding module” [60] is operable to produce/extract program-related information (Col 8, Lines 8-10) for “within program filtering” information wherein the reference teaches that within game highlights may be generated using a knowledge based system (Col 8, Lines 32-37, Col 9,

Art Unit: 2614

Lines 65-67 – Col 10, Lines 1-4). A within game highlight, such as a scoring event, is defined as a “key event” within the specification (Page 5, Lines 15-17). With respect the applicant’s statement regarding the definition of “within-audiovisual-program filtering”, the specification merely states that object level filtering is a type of within-audiovisual-program filtering. The examiner interprets this statement as an illustrative example of object level filtering as opposed to “a specific definition” of the bounds of within-audiovisual-program filtering. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In reference to claim 10, the Sezan et al. reference teaches that the embodiment “further comprises description information” which comprises an “index” for use in “database archiving” and retrieval of audiovisual programming (Col 12, Lines 56-65). Figure 2, illustrates a data storage unit [50], which may be used in conjunction with the filtering and browsing module [52] to retrieve, or store/archive programs (Col 9, Lines 19-22).

With respect to claim 11, the Sezan et al. reference discloses that the receiver [16] “comprises a register of user preferences. . . “ [20] that are used “in generating said program-related information and said summaries” (Col 8, Lines 21-29). The “decoding and demultiplexing module” [60] implicitly disassembles the input program stream based on the aforementioned “user preferences” such that the embodiment tunes to the desired programming (Col 9, Lines 48-42; Col 10, lines 30-37). The reference further teaches that the “summarizer” [42/44] uses user preferences as well as the “decoder/demultiplexed”

Art Unit: 2614

extracted program-related information (Col 8, Lines 8-10) information to generate summary information (Col 8, Lines 22-29).

10. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sezan et al. (US Pat No. 6,236,395), in view of the Hanjalic et al. article.

Claim 12 is rejected wherein the Sezan et al. reference discloses a receiver [16] that comprises a “program summarizer” [42/44] that is operable to “receive a data broadcast service for filtering and generating summaries of audiovisual programs” [38] (Col 7, Lines 56-67 – Col 8, Line 1). Sezan et al. teaches that different “realizations and applications” may be readily derived from the embodiment illustrated in Figures 2 and 3 by reorganizing and utilizing different components (Col 10, Lines 66-67 – Col 11, Lines 1-5).

The disclosed “program summarizer” [42/44] is taught to comprise modules that are operable to “parse and extract an audiovisual program descriptors” to the description scheme generation module [44] (Col 8, Lines 10-14), to “extract PSIP and DVB-SI information” [60] (Col 8, Lines 21-29), to “combine audiovisual program description with PSIP information, user preferences, and any other available program information” (Col 7, Lines 63 – Col 8, Lines 1, 14-29; Col 5, Lines 46-50), to “extract key clips from a video program” [76/78] (Col 8, Lines 30-48), and to “provide” and “produce summaries of audiovisual” material [78] in the form of program highlights (Col 8, Lines 49-55). Accordingly, the summarizer [42/44] implicitly comprises an “inference engine operable to combine said audio visual program description with said PSIP information, user preferences, and any other available program information” (Col 7, Lines 63 – Col 8, Lines 1, 14-29; Col 5, Lines 46-50) as further

Art Unit: 2614

supported by the applicant's remarks (Page 9, Lines 1-4). The "key-clip map table" is shown in Figure 14 (Col 26, Lines 51-54).

In response to applicant's argument that the key frame extraction module [76] is not the same as a key clip extraction module. The instant application discloses that "key frames are special cases of key clips, i.e.; they can be viewed as key clips that contain a single frames." (Page 6, Lines 1-3). Based on the disclosure of the instant application, the examiner concludes that "key frames" are a particular type of "key clip" and as such the claimed language supports the rejection using the key-frame summarizer [76].

As aforementioned, however, the Sezan et al. "inference engine", does not explicitly disclose nor preclude that the "descriptors in the audiovisual program description directly correspond to descriptors in the PSIP information". The Hanjalic et al. article discloses a "summarizer" wherein "descriptors that directly correspond to descriptors in the PSIP data" are utilized to in order to provide identification of services and events for the user (Sections 5.1 and 5.2). Accordingly, it would have been obvious to modify the Sezan et al. reference, if necessary, to utilize "descriptors that directly correspond to descriptors in the PSIP information" as taught by Hanjalic et al. for the purpose of providing a means for providing a textual identification including additional details related to the clip over and above a simple title generator [68] as provided by Sezan et al.

Claim 14 is rejected wherein the aforementioned Sezan et al. reference discloses that the "program information" may comprise web page or other suitable information downloaded from a web site (Col 5, Lines 25-29; Col 9, Lines 65-67 – Col 10, Lines 1-4).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907. The examiner can normally be reached on Monday-Friday from 8:00 a.m. - 5:30 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Application/Control Number: 09/298,282
Art Unit: 2614

Page 14

SEB
March 12, 2003



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